

**AMENDMENTS TO THE CLAIMS**

- 1. (Previously Presented)** A variable gain amplification circuit comprising:

a signal generator having an output load part comprising a variable resistor or a variable inductor, and an output terminal;

a variable capacitor connected between said output terminal and an AC grounded terminal; and

a control circuit operable to control an output amplitude of said signal generator and a capacitance value of said variable capacitor,

wherein said control circuit controls the capacitance value of said variable capacitor so as to make a cutoff frequency or a resonance frequency of said signal generator constant.
- 2. (Currently Amended)** A variable gain amplification circuit as defined in Claim 1, wherein said signal generator includes the variable resistor at the output load part thereof, and does not include the variable inductor at the output load part thereof.
- 3. (Currently Amended)** A variable gain amplification circuit as defined in Claim 1, wherein said signal generator includes the variable inductor at the output load part thereof, and does not include the variable resistor at the output load part thereof.
- 4. (Previously Presented)** A variable gain amplification circuit as defined in Claim 1, wherein said signal generator comprises:

a variable gain mixer having a first input terminal and a second input terminal;

an RF signal source connected to said first input terminal of said variable gain mixer;  
and

an LO signal source connected to said second input terminal of said variable gain  
mixer.

**5. (Previously Presented)** A variable gain amplification circuit as defined in Claim 1, wherein said signal generator comprises:

a variable gain amplifier having a first input terminal; and

an RF signal source connected to the first input terminal of the variable gain amplifier.

**6-14. (Canceled)**

**15. (Previously Presented)** A variable gain amplification circuit as defined in Claim 5, wherein said RF signal source has a signal band equal to or larger than 100MHz.

**16. (Previously Presented)** A variable gain amplification circuit comprising:  
a signal generator having an output load part comprising a variable resistor or a  
variable inductor, and an output terminal;  
a variable capacitor connected between said output terminal and an AC grounded  
terminal; and  
a control means for controlling an output amplitude of said signal generator and for  
controlling a capacitance value of said variable capacitor so as to make a cutoff frequency or a

resonance frequency of said signal generator constant.

**17. (Currently Amended)** A variable gain amplification circuit as defined in Claim 16,

wherein said signal generator includes the variable resistor at [[an]] the output load part thereof, and does not include the variable inductor at the output load part thereof.

**18. (Currently Amended)** A variable gain amplification circuit as defined in Claim 16,

wherein said signal generator includes the variable inductor at [[an]] the output load part thereof, and does not include the variable resistor at the output load part thereof.

**19. (Previously Presented)** A variable gain amplification circuit as defined in Claim 16, wherein said signal generator comprises:

a variable gain mixer having a first input terminal and a second input terminal;

an RF signal source connected to said first input terminal of said variable gain mixer;

and

an LO signal source connected to said second input terminal of said variable gain mixer.

**20. (Previously Presented)** A variable gain amplification circuit as defined in Claim 16, wherein said signal generator comprises:

a variable gain amplifier having a first input terminal; and  
an RF signal source connected to the first input terminal of the variable gain amplifier.

**21. (Previously Presented)** A variable gain amplification circuit as defined in Claim 20,

wherein said RF signal source has a signal band equal to or larger than 100MHz.

**22. (New)** A variable gain amplification circuit as defined in Claim 1,  
wherein said variable capacitor includes a circuit comprising at least two capacitors placed in parallel, and at least one switch connected to an end of one of said at least two capacitors; and

wherein the capacitance of said variable capacitor is varied by ON/OFF of said at least one switch.

**23. (New)** A variable gain amplification circuit as defined in Claim 1,  
wherein said variable capacitor includes a capacitor and a MOS device whose gate terminal is connected to said capacitor; and

wherein the capacitance of said variable capacitor is varied by a bias voltage supplied to said gate terminal of said MOS device.

**24. (New)** A variable gain amplification circuit as defined in Claim 2,  
wherein said variable resistor includes a circuit comprising at least two resistors placed

in parallel, and at least one switch connected to an end of one of said at least two resistors;

and

wherein the resistance of said variable resistor is varied by ON/OFF of said at least one switch.

**25. (New)** A variable gain amplification circuit as defined in Claim 3,

wherein said variable inductor is constituted by a circuit comprising at least two inductors placed in parallel, and at least one switch connected to an end of one of said at least two inductors; and

wherein the inductance of said variable inductor is varied by ON/OFF of said at least one switch.

**26. (New)** A variable gain amplification circuit comprising:

a signal generator having an output load part comprising a variable inductor and an output terminal;

a variable capacitor connected between said output terminal and an AC grounded terminal; and

a control circuit operable to control an output amplitude of said signal generator and a capacitance value of said variable capacitor,

wherein said control circuit controls the capacitance value of said variable capacitor so as to make a cutoff frequency or a resonance frequency of said signal generator constant, and

wherein said variable inductor is constituted by a circuit comprising at least two inductors placed in parallel.